

What is claimed is:

1. A method of receiving, storing, and forwarding a print job over a network, comprising:
forwarding said print job to a spooling server;
receiving said print job at said spooling server;
storing said print job at said spooling server;
receiving a polling request for said print job at said spooling server from a printer polling device; and
forwarding said requested print job from the spooling server to the printer polling device.

2. A method in accordance with claim 1, wherein the print job is printed at a printer coupled to said printer polling device.

3. A method in accordance with claim 2, wherein said printer is located at a location remote from said spooling server.

4. A method in accordance with claim 1, wherein the print job is forwarded to the spooling server without a pre-determined print destination.

5. A method in accordance with claim 1, wherein the printer polling device periodically polls the spooling server to

identify print jobs associated with the printer polling device.

6. A method in accordance with claim 1, wherein the network comprises:

at least one of a local area network, a wide area network, a global network, and the Internet.

7. A method in accordance with claim 1, wherein:

said printer polling device is located within a gateway firewall; and

said spooling server is located outside said gateway firewall.

8. A method in accordance with claim 7, wherein:

the print job is forwarded to the spooling server as web-style traffic and received at the printer polling device as web-style traffic.

9. A method in accordance with claim 7, wherein:

the print job is forwarded to the spooling server such that reconfiguration of the gateway firewall is not required.

10. A method in accordance with claim 1, wherein:

a print job source is located at and in communication with a first local area network and forwards the print job to the spooling server;

the printer polling device is located at and in communication with a second local area network; and

the spooling server is located outside of the first and second local area networks.

11. A method in accordance with claim 10, wherein:

the print job source communicates with the spooling server via a first gateway firewall which controls access to the first local area network; and

the printer polling device communicates with the spooling server via a second gateway firewall which controls access to the second local area network.

12. A method in accordance with claim 1, wherein:

the spooling server is capable of storing multiple print jobs in at least one spooling queue.

13. A method in accordance with claim 1, further comprising:

providing for encryption of the print job at a print job source; and

providing for decryption of the print job at the printer polling device.

14. A method in accordance with claim 1, wherein the print job comprises a document provided by a content provider.

15. A method in accordance with claim 14, wherein said content provider is one of a newspaper, a magazine, a periodical, a document provider, a graphic arts provider, a notification service, an Internet content provider, a merchant, a financial institution, a government agency, or a shipping company.

16. A method in accordance with claim 14, wherein a single print job is provided by the content provider for multiple users.

17. A method in accordance with claim 14, wherein the print job is provided by the content provider on a subscription basis.

18. A method in accordance with claim 1, wherein a fee is charged to access the spooling server.

19. A method in accordance with claim 1, further comprising:
storing each print job at the spooling server according to a personal identification number (PIN).

20. A method in accordance with claim 19, further comprising:

communicating from said spooling server to said printer polling device a list of print jobs associated with the PIN which are stored at the spooling server; and

providing for the selection of a print job.

21. A method in accordance with claim 19, further comprising:

storing a plurality of print jobs on the spooling server according to the PIN.

22. A method in accordance with claim 19, wherein:

the PIN is provided to the spooling server via one of a user interface associated with the printer polling device, a telephone, a computer, an Internet appliance, a facsimile machine, a scanner, a personal digital assistant device, or a dedicated terminal;

the list of available print jobs is displayed on one of a user interface associated with the printer polling device, a telephone, a computer, an Internet appliance, a facsimile machine, a scanner, a personal digital assistant device, or a dedicated terminal; and

selection of an available print job is made via a user interface associated with the printer polling device, a

telephone, a computer, an Internet appliance, a facsimile machine, a scanner, a personal digital assistant device, or a dedicated terminal.

23. A method in accordance with claim 1, further comprising:

providing for designation of a desired print location for the print job at a print job source;

providing for communication of the desired print location to the spooling server; and

printing the print job at the desired print location when the printer polling device at the desired print location polls the spooling server and identifies the print job.

24. A method in accordance with claim 1, further comprising:

providing for designation of a substantially specific time for printing a print job; and

making said print job available for printing from the spooling server only at the designated substantially specific time.

25. A method in accordance with claim 1, further comprising:

providing for a designated lifetime of the print job, wherein said print job will be stored only for the designated lifetime.

26. A method in accordance with claim 1, further comprising:

providing for a designated number of printings of said print job, wherein said print job can only be printed the designated number of times.

27. A method in accordance with claim 26, wherein:

the print job is one of a negotiable instrument, a stamp, a coupon, a certificate, a check, a unit of currency, a token, or a receipt.

28. A method in accordance with claim 1, further comprising:

providing for the designation of one or more recipients of said print job, wherein the print job can only be printed by the designated one or more recipients.

29. A method in accordance with claim 1, wherein the printer polling device communicates printer status to the spooling server.

30. A method in accordance with claim 29, wherein the printer status comprises at least one of a printer ready indication, an on-line indication, toner level information, paper supply information, or error information.

31. A method in accordance with claim 29, further comprising:

notifying a printer operator when said printer status indicates that the printer requires attention.

32. A method in accordance with claim 31, further comprising:

providing the operator with vendor contact information to facilitate obtaining printer supplies or service.

33. A method in accordance with claim 29, further comprising:

providing for automatic on-line ordering of printer supplies as required by printer status.

34. A method in accordance with claim 1, wherein the print job comprises at least one of a document, a poster, an image, a coupon, a ticket, a certificate, a check, a list, a schedule, a periodical, a unit of currency, a negotiable instrument, postage, a bill of lading, a lottery or gaming ticket, a token, food stamps, a license, a permit, a pass,

a passport, a ballot, a citation, identification, a copy-protection key, a proof-of-purchase, a warranty, a receipt, a transcript, or a library card

35. A method in accordance with claim 1, further comprising:

providing an agent program that provides a directory of documents to the spooling server, said agent program enabling a client device associated with the print job source to poll the spooling server to determine whether the spooling server requires a document from the directory to complete a print job; and

uploading the document from the client device to the spooling server.

36. A method in accordance with claim 35, further comprising:

communicating the directory to the printer polling device;

presenting the directory at the printer polling device; and

providing for selection of a print job from the directory.

37. A method in accordance with claim 36, wherein presenting the directory comprises one of a visual

presentation or an audio presentation.

38. A method in accordance with claim 35, wherein the client device periodically polls the spooling server.

39. A method in accordance with claim 1, wherein communications with the spooling server are enabled via at least one of a telephone, a personal digital assistant device, a computer, an Internet appliance, a web browser, or a dedicated terminal.

40. A method in accordance with claim 1, further comprising providing a communication device for providing the status of the print job stored on the spooling server.

41. A method in accordance with claim 40, wherein the status of the print job comprises at least one of filename, file size, author, creation date, print job lifetime, image, title, contents, personal identification number, recipient, job number, or reference number.

42. A method in accordance with claim 40, wherein the communication device comprises one of a telephone, a computer, an Internet appliance, a personal digital assistant device, or a dedicated terminal.

43. A method in accordance with claim 1, wherein the print job source is one of a computer, a personal digital assistant device, an Internet appliance, a facsimile machine, a scanner, a telephone, or a dedicated terminal.

44. A method in accordance with claim 1, wherein said printer polling device is capable of polling multiple spooling servers.

45. A method in accordance with claim 1, further comprising:
providing for the communication between said spooling server and other servers; and
receiving a print job from at least one of the other servers at the spooling server.

46. A spooling server for receiving, storing, and forwarding a print job over a network, comprising:
memory for storing said print job at said spooling server;
a receiver for receiving said print job at said spooling server, said receiver adapted to receive a polling request for said print job at said spooling server from a printer polling device; and
a transmitter for forwarding said requested print job from the spooling server to the printer polling device.

47. A spooling server in accordance with claim 46, wherein the print job is printed at a printer coupled to said printer polling device.

48. A spooling server in accordance with claim 47, wherein said printer is located at a location remote from said spooling server.

49. A spooling server in accordance with claim 46, wherein the print job is forwarded to the spooling server without a pre-determined print destination.

50. A spooling server in accordance with claim 46, wherein the printer polling device periodically polls the spooling server to identify print jobs associated with the printer polling device.

51. A spooling server in accordance with claim 46, wherein the network comprises:

at least one of a local area network, a wide area network, a global network, and the Internet.

52. A spooling server in accordance with claim 46, wherein:

said printer polling device is located within a gateway firewall; and

10
B01
9
8
7
6
5
4
3
2
1
said spooling server is located outside said gateway firewall.

53. A spooling server in accordance with claim 52, wherein:

the print job is forwarded to the spooling server as web-style traffic and received at the printer polling device as web-style traffic.

54. A spooling server in accordance with claim 52, wherein:

the print job is forwarded to the spooling server such that reconfiguration of the gateway firewall is not required.

55. A spooling server in accordance with claim 46, wherein:

a print job source is located at and in communication with a first local area network and forwards the print job to the spooling server;

the printer polling device is located at and in communication with a second local area network; and

the spooling server is located outside of the first and second local area networks.

56. A spooling server in accordance with claim 55, wherein:

the print job source communicates with the spooling server via a first gateway firewall which controls access to the first local area network; and

the printer polling device communicates with the spooling server via a second gateway firewall which controls access to the second local area network.

57. A spooling server in accordance with claim 46, wherein the memory comprises at least one spooling queue for storing multiple print jobs.

58. A spooling server in accordance with claim 46, wherein:
the print job is encrypted at a print job source; and
the print job is decrypted at the printer polling device.

59. A spooling server in accordance with claim 46, wherein the print job comprises a document provided by a content provider.

60. A spooling server in accordance with claim 59, wherein said content provider is one of a newspaper, a magazine, a periodical, a document provider, a graphic arts provider, a notification service, an Internet content provider, a merchant, a financial institution, a government agency, or a shipping company.

61. A spooling server in accordance with claim 59, wherein a single print job is provided by the content provider for multiple users.

62. A spooling server in accordance with claim 59, wherein the print job is provided by the content provider on a subscription basis.

63. A spooling server in accordance with claim 46, wherein a fee is charged for access the spooling server.

64. A spooling server in accordance with claim 46, wherein:
the memory stores each print job at the spooling server according to a personal identification number (PIN).

65. A spooling server in accordance with claim 64, wherein:
said spooling server communicates to said printer polling device a list of print jobs associated with the PIN which are stored at the spooling server; and
the selection of a print job is provided for.

66. A spooling server in accordance with claim 64, wherein:
the memory is capable of storing a plurality of print jobs according to the PIN.

67. A spooling server in accordance with claim 64, wherein:

the PIN is provided to the spooling server via one of a user interface associated with the printer polling device, a telephone, a computer, an Internet appliance, a facsimile machine, a scanner, a personal digital assistant device, or a dedicated terminal;

the list of available print jobs is displayed on one of a user interface associated with the printer polling device, a telephone, a computer, an Internet appliance, a facsimile machine, a scanner, a personal digital assistant device, or a dedicated terminal; and

selection of an available print job is made via a user interface associated with the printer polling device, a telephone, a computer, an Internet appliance, a facsimile machine, a scanner, a personal digital assistant device, or a dedicated terminal.

68. A spooling server in accordance with claim 46, wherein:

a desired print location for the print job is designated at a print job source;

the desired print location is communicated to the spooling server; and

the print job is printed at the desired print location when the printer polling device at the desired print location polls the spooling server and identifies the print job.

69. A spooling server in accordance with claim 46, wherein:
a substantially specific time for printing a print job
is designated; and

 said print job is made available for printing from the
spooling server only at the designated substantially
specific time.

70. A spooling server in accordance with claim 46, wherein:
a lifetime of the print job is designated, wherein
said print job will be stored only for the designated
lifetime.

71. A spooling server in accordance with claim 46, wherein:
a number of printings of said print job is designated,
wherein said print job can only be printed the designated
number of times.

72. A spooling server in accordance with claim 71, wherein:
the print job is one of a negotiable instrument, a
stamp, a coupon, a certificate, a check, a unit of
currency, a token, or a receipt.

73. A system in accordance with claim 46, wherein:
one or more recipients of said print job are
designated, wherein the print job can only be printed by
the designated one or more recipients.

74. A spooling server in accordance with claim 46, wherein the printer polling device communicates printer status to the spooling server.

75. A spooling server in accordance with claim 74, wherein the printer status comprises at least one of a printer ready indication, an on-line indication, toner level information, paper supply information, or error information.

76. A spooling server in accordance with claim 74, wherein: a printer operator is notified when said printer status indicates that the printer requires attention.

77. A spooling server in accordance with claim 76, wherein: the operator is provided with vendor contact information to facilitate obtaining printer supplies or service.

78. A spooling server in accordance with claim 74, wherein: automatic on-line ordering of printer supplies as required by printer status is provided.

79. A spooling server in accordance with claim 46, wherein the print job comprises at least one of a document, a poster, an image, a coupon, a ticket, a certificate, a check, a list, a schedule, a periodical, a unit of currency, a negotiable instrument, postage, a bill of lading, a lottery or gaming ticket, a token, food stamps, a license, a permit, a pass, a passport, a ballot, a citation, identification, a copy-protection key, a proof-of-purchase, a warranty, a receipt, a transcript, or a library card.

80. A spooling server in accordance with claim 46, wherein:

an agent program provides a directory of documents to the spooling server, said agent program enabling a client device associated with the print job source to poll the spooling server to determine whether the spooling server requires a document from the directory to complete a print job; and

the document can be uploaded from the client device to the spooling server.

81. A spooling server in accordance with claim 80, wherein:

the directory is communicated to the printer polling device;

the directory is presented at the printer polling device; and

for selection of a print job from the directory is provided for.

82. A spooling server in accordance with claim 81, wherein the directory is presented via one of a visual presentation or an audio presentation.

83. A spooling server in accordance with claim 80, wherein the client device periodically polls the spooling server.

84. A spooling server in accordance with claim 46, wherein communications with the spooling server are enabled via at least one of a telephone, a personal digital assistant device, a computer, an Internet appliance, a web browser, or a dedicated terminal.

85. A spooling server in accordance with claim 46, wherein a communication device for providing the status of the print job stored on the spooling server is provided.

86. A spooling server in accordance with claim 85, wherein the status of the print job comprises at least one of filename, file size, author, creation date, print job lifetime, image, title, contents, personal identification number, recipient, job number, or reference number.

87. A spooling server in accordance with claim 85, wherein the communication device comprises one of a telephone, a computer, an Internet appliance, a personal digital assistant device, or a dedicated terminal.

88. A spooling server in accordance with claim 46, wherein the print job source is one of a computer, a personal digital assistant device, an Internet appliance, a facsimile machine, a scanner, a telephone, or a dedicated terminal.

89. A spooling server in accordance with claim 46, wherein said printer polling device is capable of polling multiple spooling servers.

90. A spooling server in accordance with claim 46, wherein:

said spooling server is capable of communicating with other servers; and

said spooling server is capable of receiving a print job from at least one of the other servers.